

BY JERRY WHITING LeBlanc CNE.com/podcast

BREEDERS & SEEDERS IT ALL BEGINS WITH THE PLANT

Breeders have success amidst their failures and false starts. Breeding takes time. How will breeders get rewarded for creating new and better cultivars? How will the pricing model scale as hemp cultivation explodes?

Looking even further ahead, how will cloning, micropropagation and tissue culture impact the industry? How closely will hemp and Cannabis mirror corn, wheat, tomatoes and other agricultural crops?

Will the established Big Ag companies come to dominate hemp and Cannabis genetics, or will the existing pioneers grow to become industry leaders too? In the old days, when you bought a pack of beans, gear, or seeds, you got to do with it as you pleased.

No breeder wants you to grow a seed crop of your own for resale. Use it to jumpstart your own breeding project, adding value to the Cannabis gene pool for everyone to enjoy? That's not only OK, but heartily encouraged. Fast forwarding to today, is it fair to spend one or two

> hundred dollars, and grow it out to acres upon acres without compensation to the original breeder'n'seeder?

Exactly what rights and obligations accompany the genetics you acquire? To date, there's been no consensus or way for a customer to know exactly what they can and can't do with the seeds they purchased. Having this brought to my attention by DJ Short, I volunteered to explore a licensing model akin to Creative Commons.

The Cannabis Breeder's Rights is an attempt to convey the breeder's wishes regarding propagation, commercialization and attribution. There are 22 designations that encompass the various scenarios, some of which are unique enough to hemp and Cannabis that the existing open source seed schemas don't work.

No, there's no enforcement component, nor is there any attempt to comply with existing plant patents or other legal constructs. No lawyers need be involved. Before you say alternative licensing frameworks can't survive in today's capitalist context, remember that the internet runs on Linux and Linux is distributed under a copyleft license (GNU General Public License)

Coming from 30+ years in software, to me Creative Commons compared to Cannabis Breeder's Rights simply swaps 1's and 0's for DNA. It's all intellectual property (IP) either way, and IP can be licensed as well as sold. The Cannabis Breeder's Rights establishes a standardized framework for hemp & Cannabis genetics to be licensed, hopefully in ways that gives advantages to our beloved breeder's'n'seeders who make all of this possible for us to enjoy. It all begins with the plant.

2019 will undoubtedly go down as the year hemp surpassed Cannabis. The signing of the farm bill unleashed those sitting on the sidelines and now Big Money has jumped in with both feet. The sheer number of farmers with hemp licences for Summer 2019 is in the tens of thousands.

The shift is from Cannabis grown for THC to hemp grown for CBD. While both marijuana and industrial hemp are cannabis sativa I., there's a huge difference between the two in the marketplace. Let's start with seeds. After all, we're talking about plants. And with hemp in 2019, we're talking about thousands of acres of hemp waving in the breeze.

We're beginning to see our favorite plant grown on farms rather than in gardens, grown by the ton on tractors filling barns.

In the old days, Cannabis seeds were sold in ten packs for a hundred bucks. This business model doesn't work for farmers for several reasons, and no one buys ten packs to grow acres.

Cannabis or hemp - when it's grown on large indoor farms or especially outdoors - means bulk seeds like corn, wheat or soybeans. Farmers buy seeds by the pound (approximately 25,000 hemp seeds/pound averaging \$5,000/pound).

Farmers who've grown for the CBD market want female flowers from Mary Janes, not Mary Johns. They want feminized seeds not realizing that a feminization isn't 100% perfect, and that a handful of errant male plants or hermaphrodites will

spread pollen. Not only aren't there enough feminized seeds to supply the market, many breeders aren't necessarily eager to feminize seeds. Some feel it's not quite right on a intimate, spiritual level in relation to the plant. The demand for feminized seeds will grow as long as CBD production is profitable.

Lastly, there's the issue of genetic diversity versus uniformity.

Historically, Cannabis breeders deliberately included diversity in any given ten pack. The idea is that you'll pheno hunt - picking out the individuals that work best for you. Genetic diversity was a bonus, not a problem. Big farmers want the same thing from plant to plant, row to row, year after year.

We can agree that moving forward, breeders'n'seeders need to develop cultivars that grow uniformly season to season, are ideally fine tuned to specific growing conditions, and each with their own unique terroir. What grows well in Oregon may underperform in South Carolina. Farmers from Maine to North Michigan need early flowering cultivars in order to beat early frosts. Field tests across the country and around the world are beginning to address these issues.



THE CANNABIS BREEDER'S RIGHTS IS AN

COMMERCIALIZATION AND ATTRIBUTION.

OF WHICH ARE UNIQUE ENOUGH TO HEMP

AND CANNABIS THAT THE EXISTING OPEN

SOURCE SEED SCHEMAS DON'T WORK.

ENCOMPASS THE VARIOUS SCENARIOS, SOME

ATTEMPT TO CONVEY THE BREEDER'S

WISHES REGARDING PROPAGATION

THERE ARE 22 DESIGNATIONS THAT

Cannabis Breeder's Rights v2.0 propagation no propagation allower ustom licensing agre CBR: C-I not publicly released CBR: C-C-C commercial nurseries redit giv o credit give CBR: C-C-N cloning allowed ommercial sale: commercial nurseries CBR: C-F-C cloning allowed free distribution credit given free as in beer CBR: C-F-N free as in beer cloning allowed free distribution no credit give seed production allowed CBR: S-I in-house use onl non-feminized seed. redit giver non-feminized seeds seed production allowed non-feminized seeds CBR: S-C-N o credit giv CBR: S-F-C free distribution non-feminized seeds seed production allowed redit give CBR: S-F-N seed production allowed free distribution no credit giver non-feminized seeds CBR: B-I breeding allowed not publicly released CBR: B-C-C breeding allowed mmercial sale redit giver CBR: B-C-N breeding allowed no credit give eding allow redit give CBR: B-F-N free distributio free as in bee CBR: P-I not publicly released no propagation restrictions no propagation restrictions* CBR: P-C-C redit given commercial sale CBR: P-C-N no credit give \$\$ because the brand itself is worth something no propagation restrictions free as in beer CBR: P-F-C no propagation restrictions free distribution redit given CBR: P-F-N no propagation restrictions* free distribution no credit given

clones, seeds, breeding, grafting, tissue culture & anything else that works, present or future

LeBlanc CNE.com/cannabis-breeders-rights